T08090 "OST9Z860

FIG. 1 (PRIOR ART)

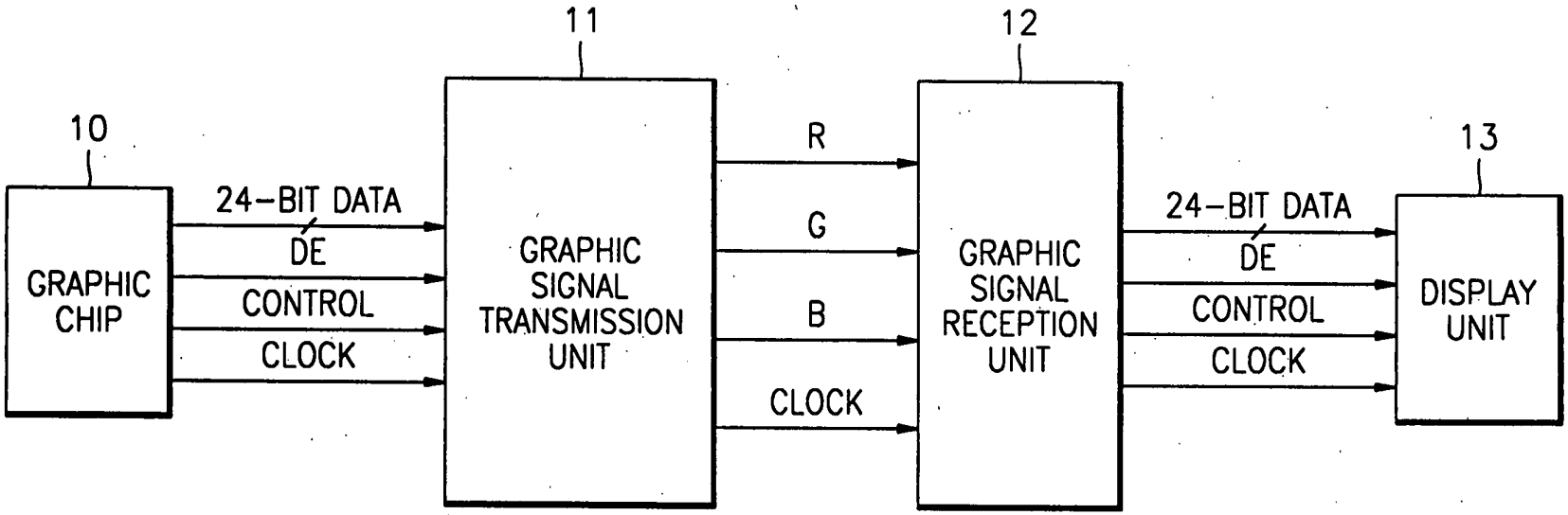

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FIG. 2

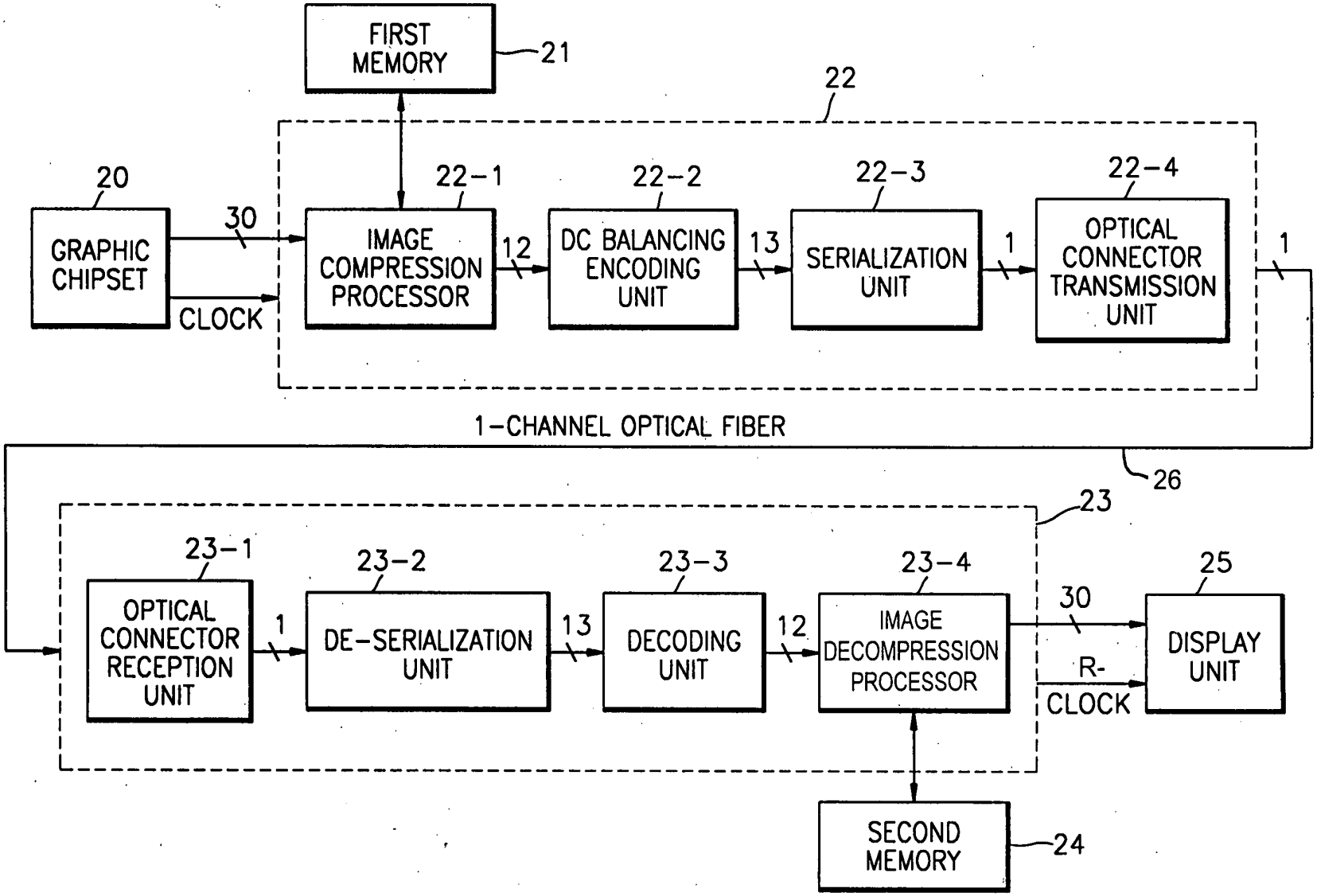

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FIG. 3

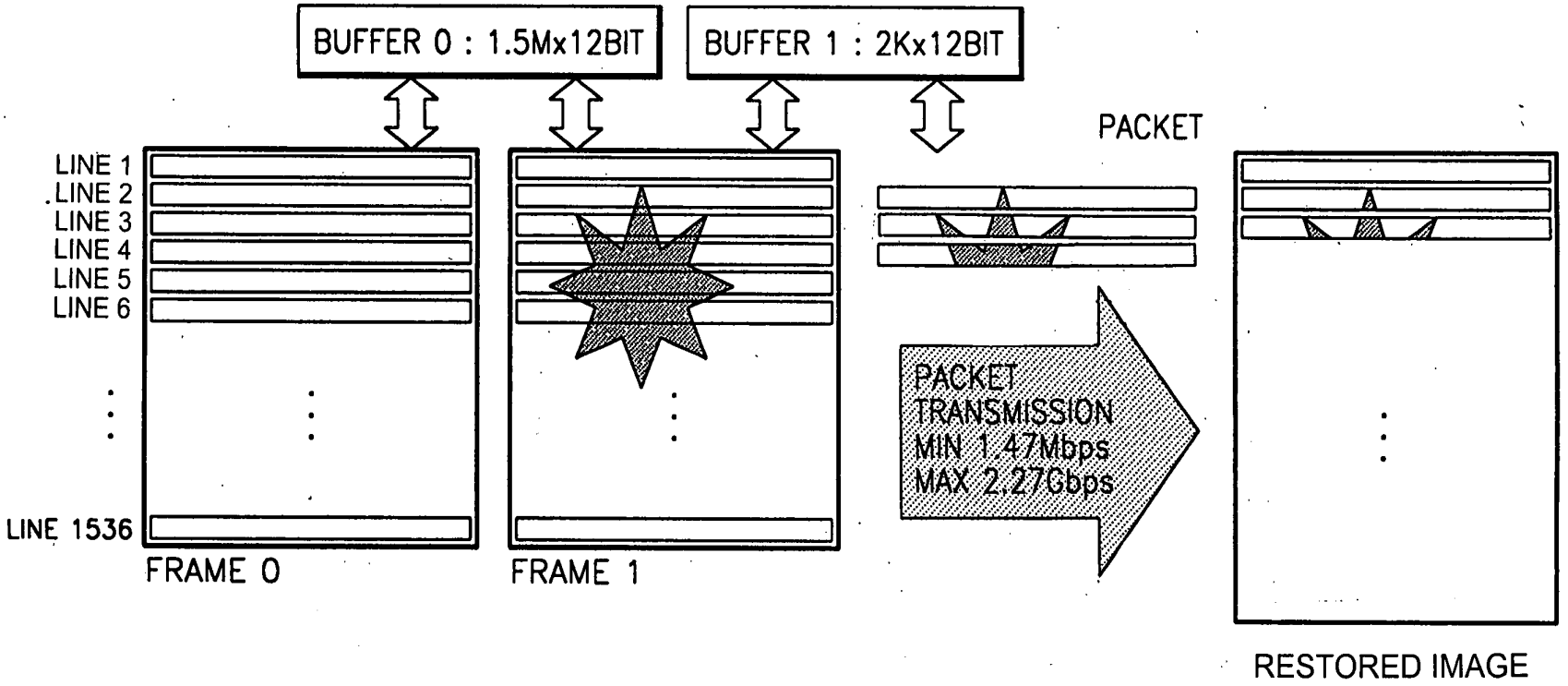

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FIG. 4

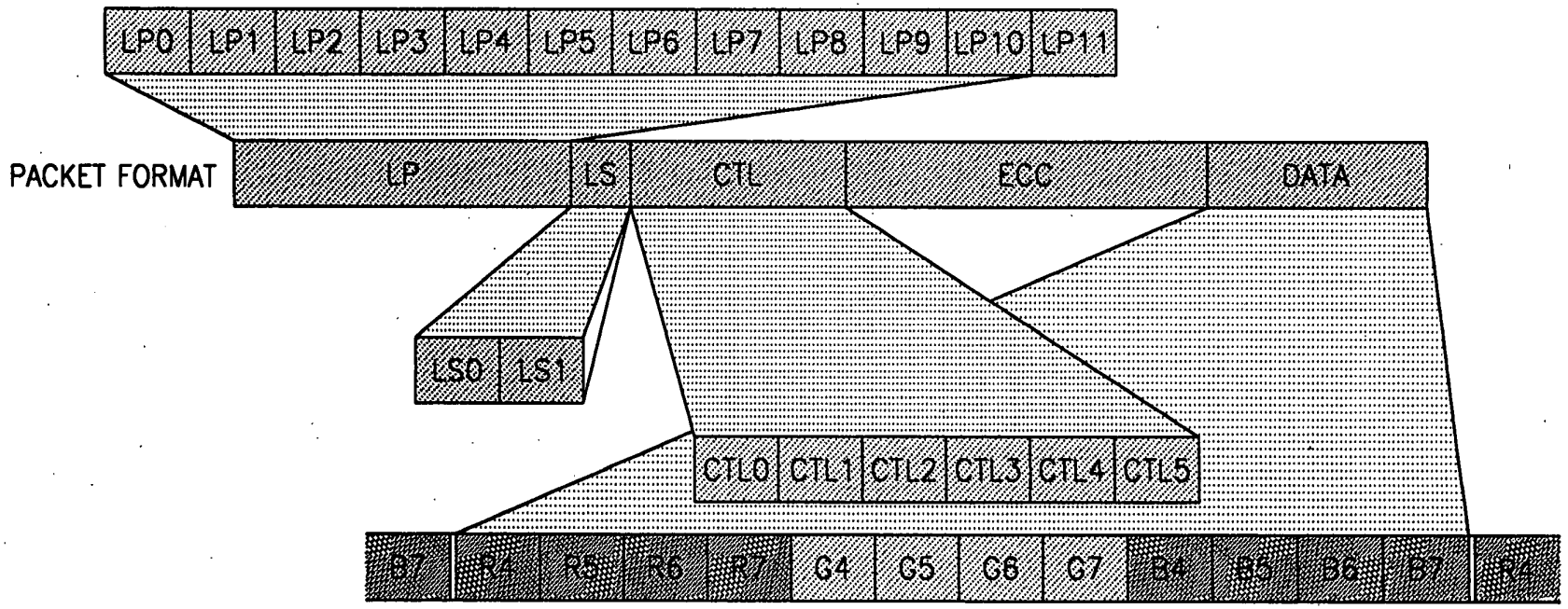

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FIG. 5

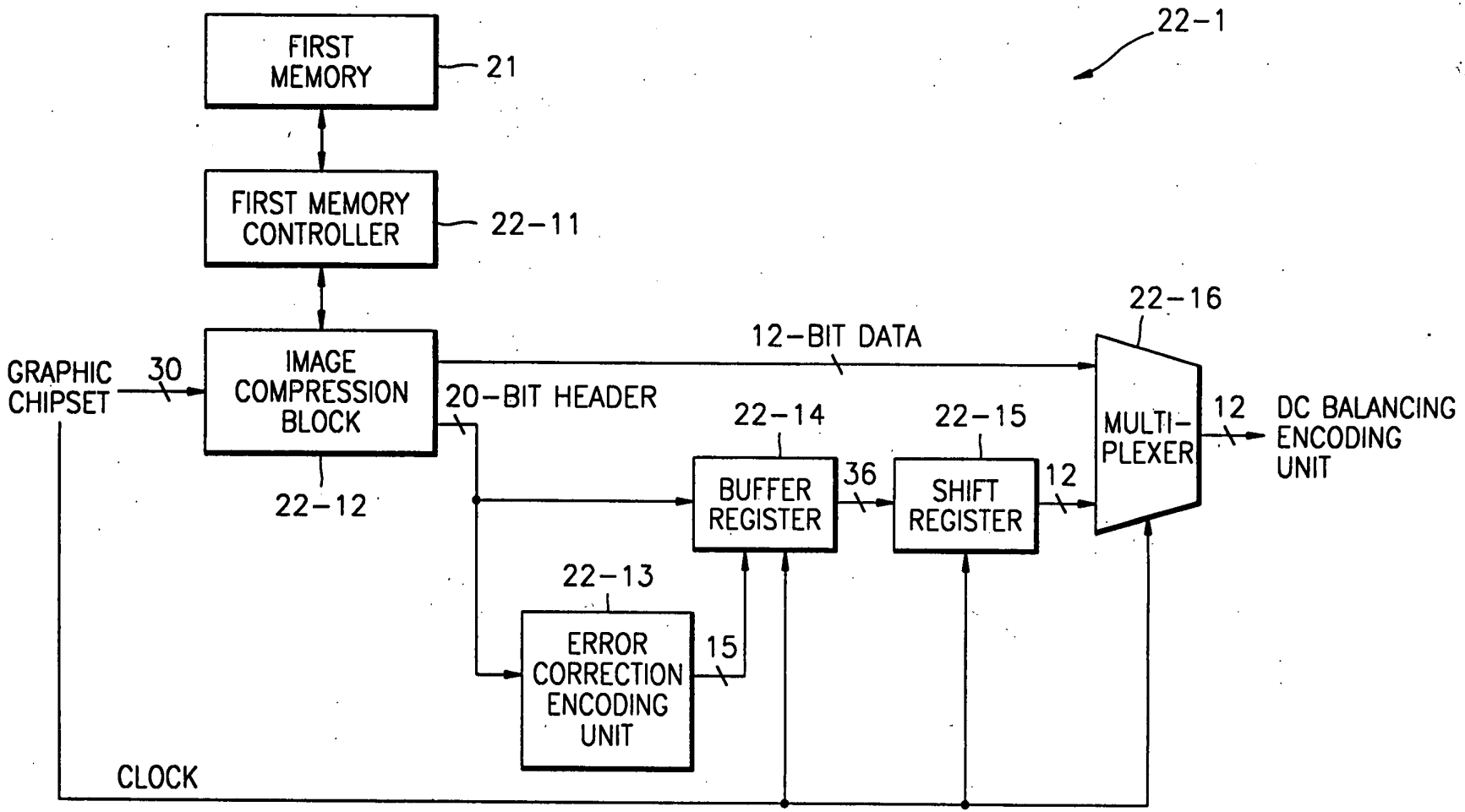

FIG. 6

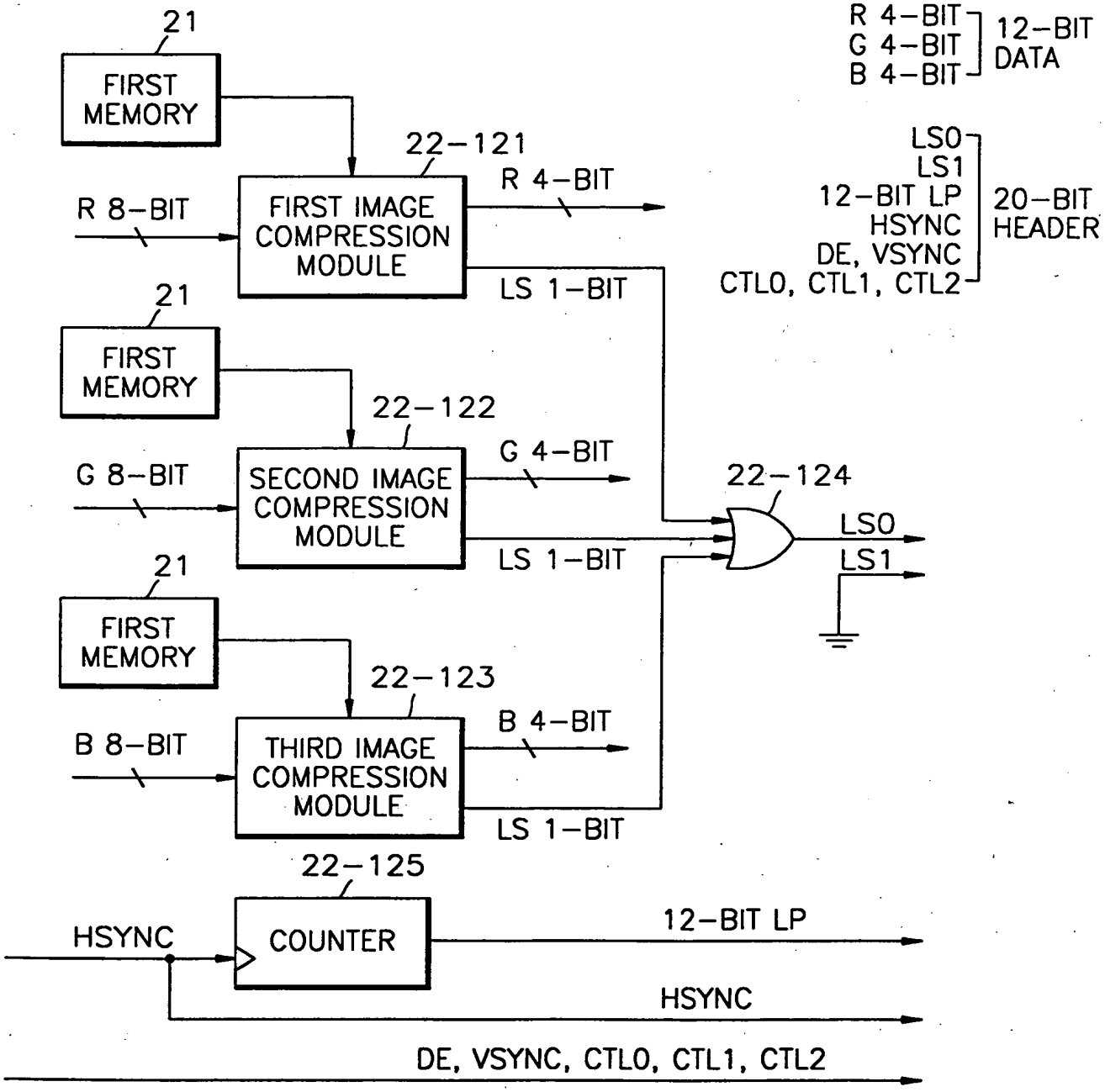
21
FIRST MEMORY
22-121
R 8-BIT
FIRST IMAGE COMPRESSION MODULE
R 4-BIT
LS 1-BIT
21
FIRST MEMORY
22-122
G 8-BIT
SECOND IMAGE COMPRESSION MODULE
G 4-BIT
LS 1-BIT
21
FIRST MEMORY
22-123
B 8-BIT
THIRD IMAGE COMPRESSION MODULE
B 4-BIT
LS 1-BIT
22-124
LS0
LS1
22-125
HSYNC
COUNTER
12-BIT LP
HSYNC
DE, VSYNC, CTL0, CTL1, CTL2
R 4-BIT
G 4-BIT
B 4-BIT
12-BIT DATA
LS0
LS1
12-BIT LP
HSYNC
DE, VSYNC
CTL0, CTL1, CTL2
20-BIT HEADER

FIG. 7A

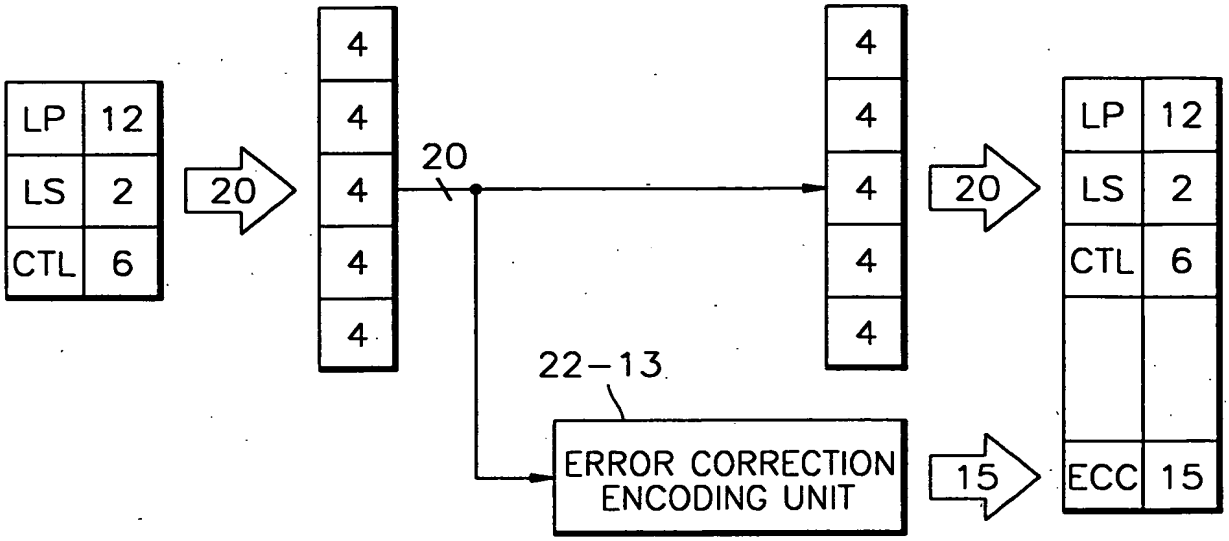
LP 12
LS 2
CTL 6
20
4
4
4
4
4
20
22-13
ERROR CORRECTION ENCODING UNIT
15
LP 12
LS 2
CTL 6
ECC 15

FIG. 7B

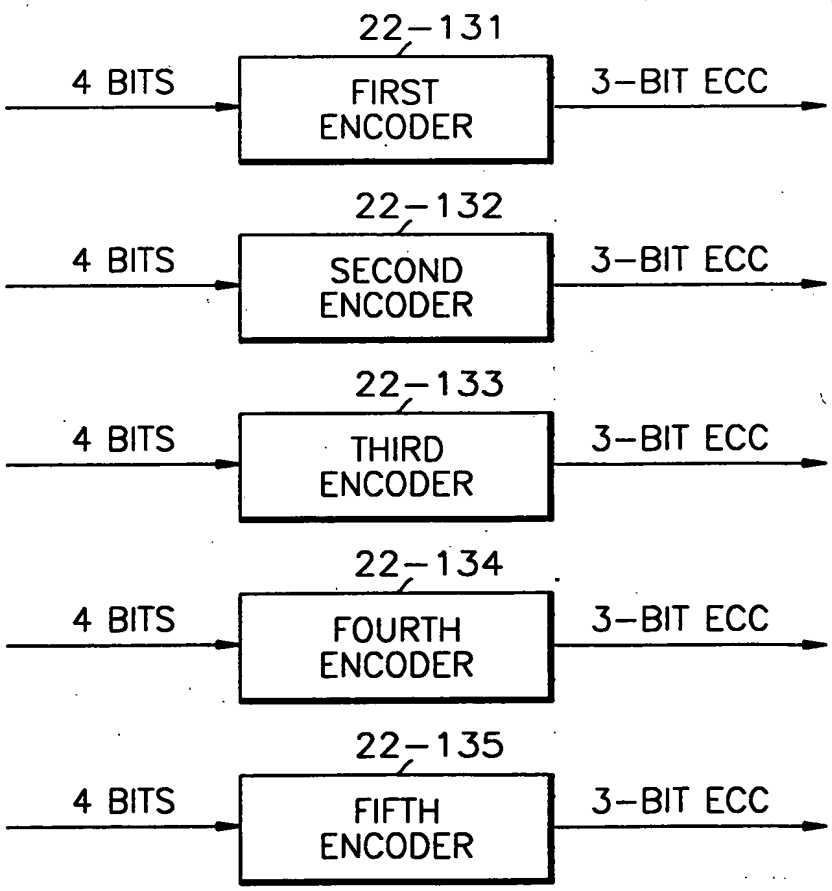
22-131
4 BITS
FIRST ENCODER
3-BIT ECC
22-132
4 BITS
SECOND ENCODER
3-BIT ECC
22-133
4 BITS
THIRD ENCODER
3-BIT ECC
22-134
4 BITS
FOURTH ENCODER
3-BIT ECC
22-135
4 BITS
FIFTH ENCODER
3-BIT ECC

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FIG. 8

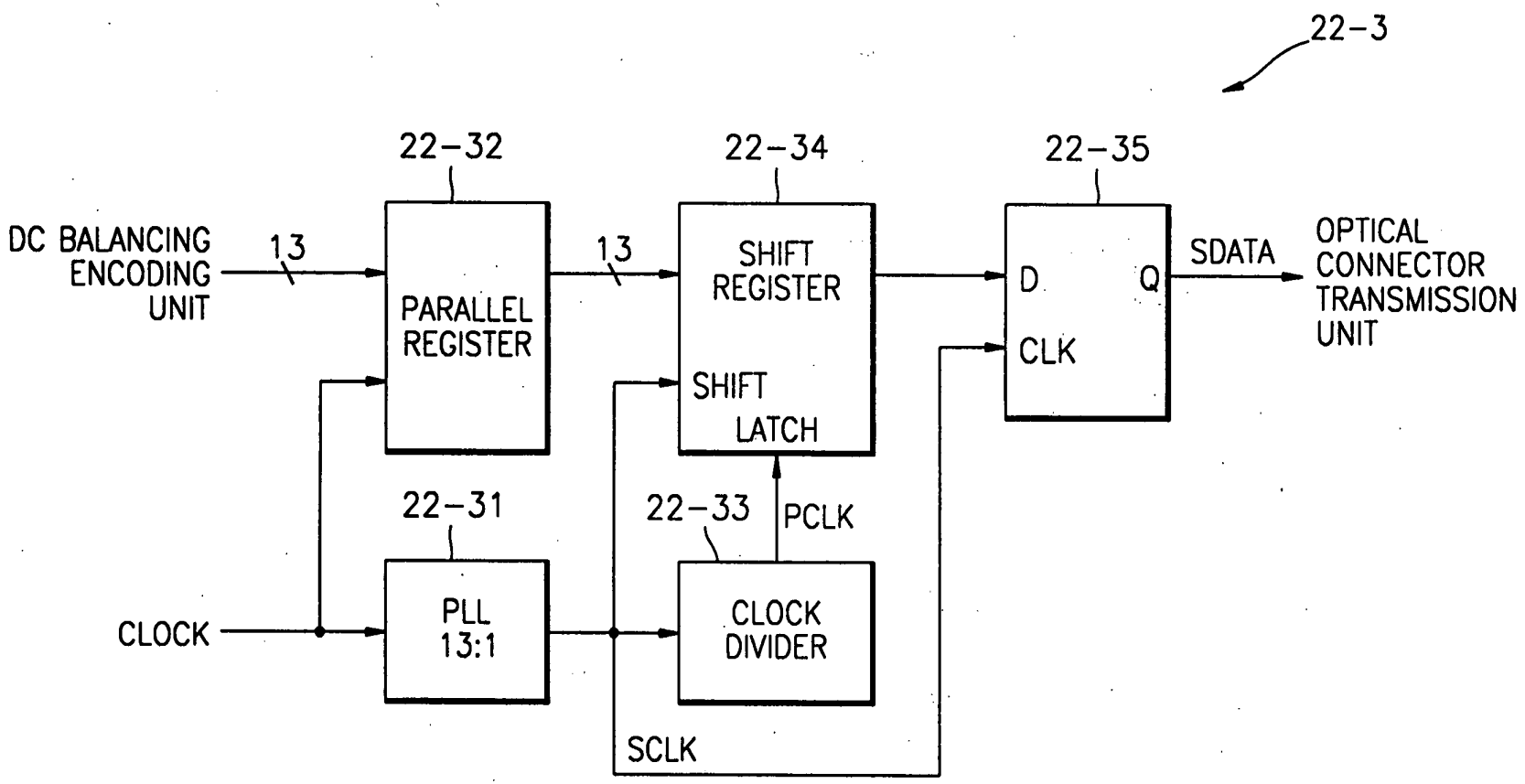

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FIG. 9

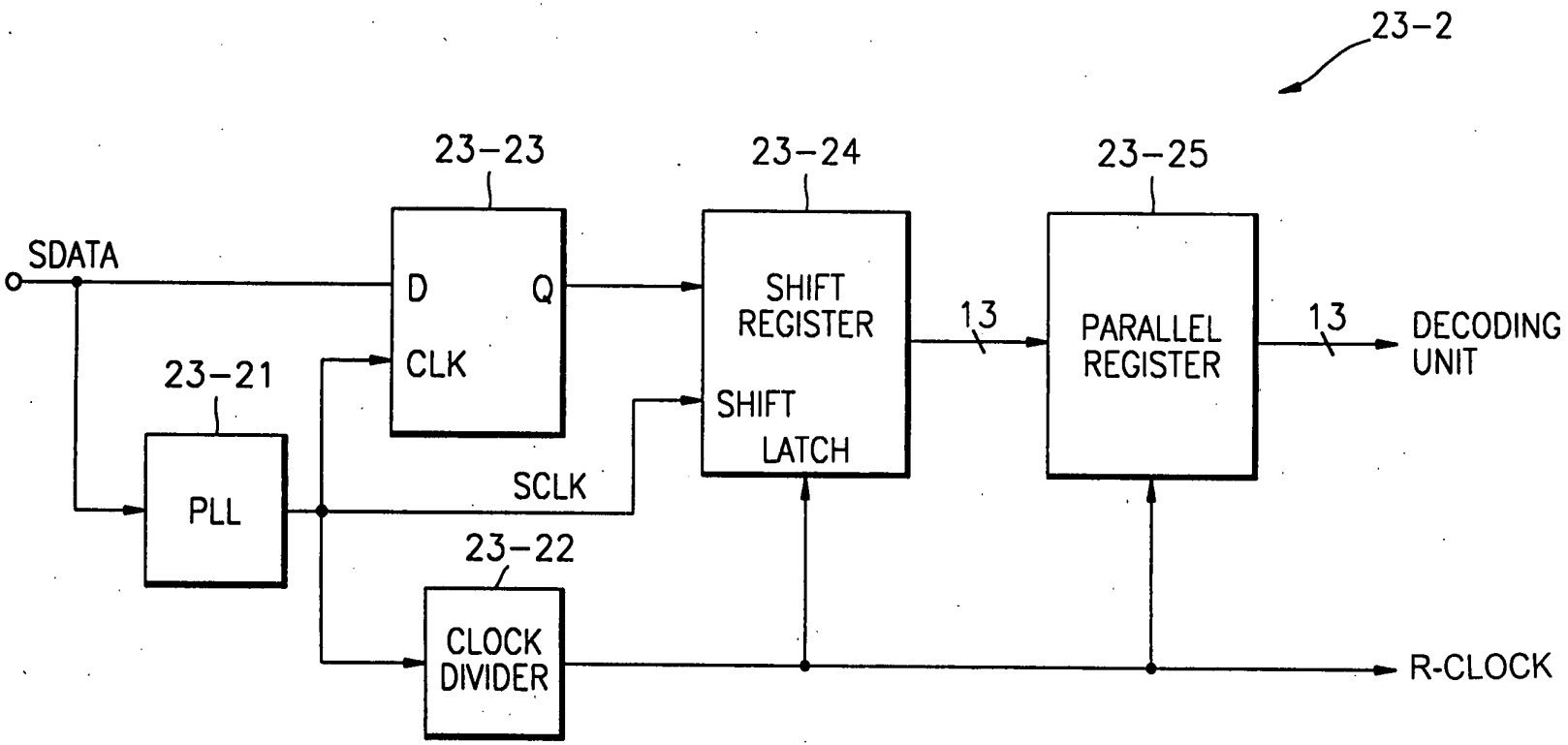

FIG. 10

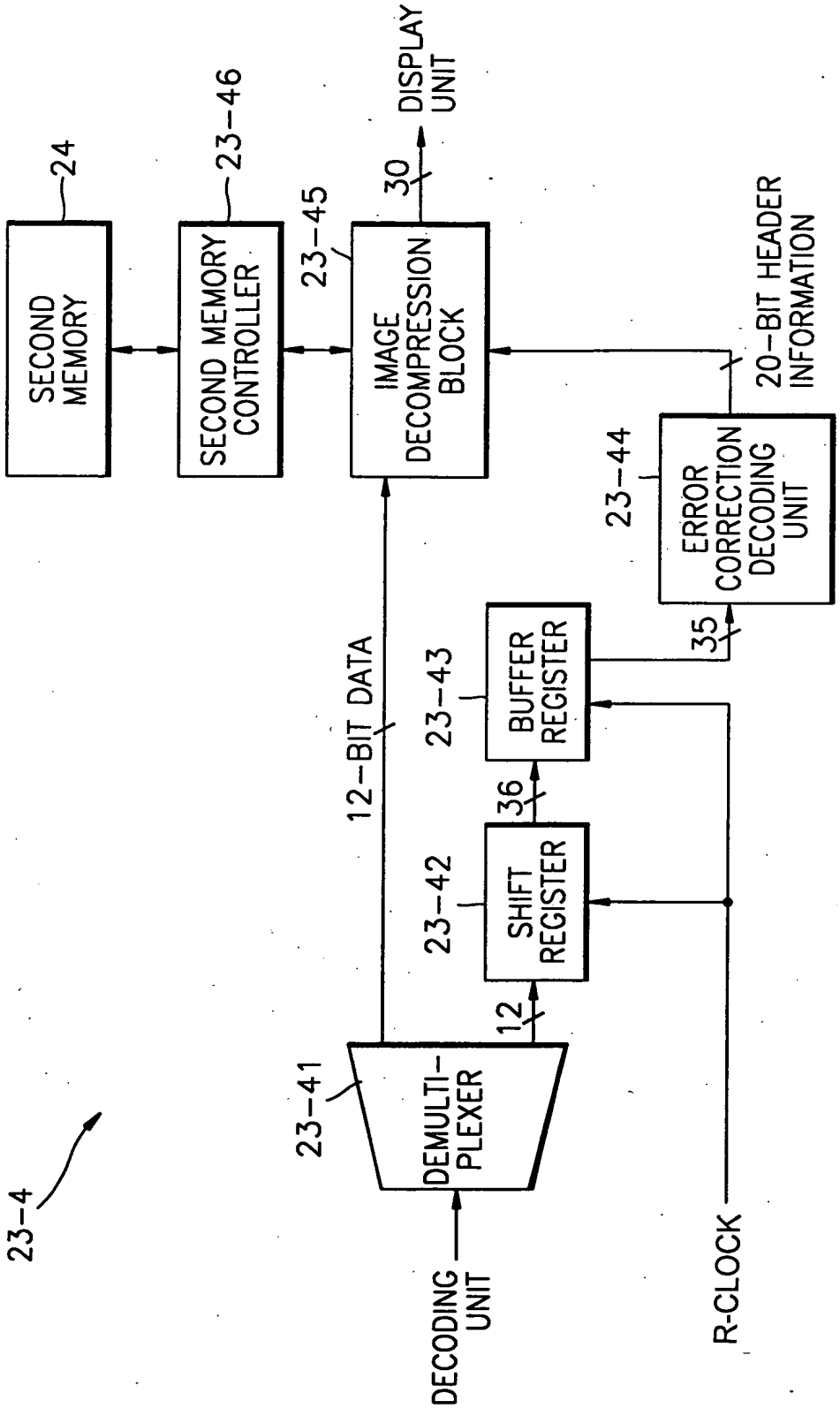
23-4
DECODING UNIT
23-41
DEMULTI-PLEXER
12
23-42
SHIFT REGISTER
36
23-43
BUFFER REGISTER
12-BIT DATA
35
23-44
ERROR CORRECTION DECODING UNIT
20-BIT HEADER INFORMATION
R-CLOCK
23-45
IMAGE DECOMPRESSION BLOCK
30
DISPLAY UNIT
23-46
SECOND MEMORY CONTROLLER
24
SECOND MEMORY

FIG. 11A

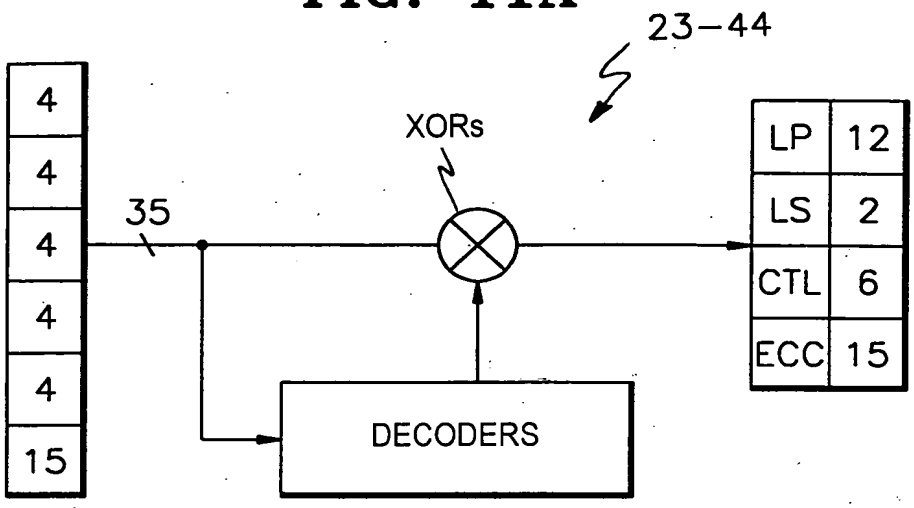

FIG. 11B

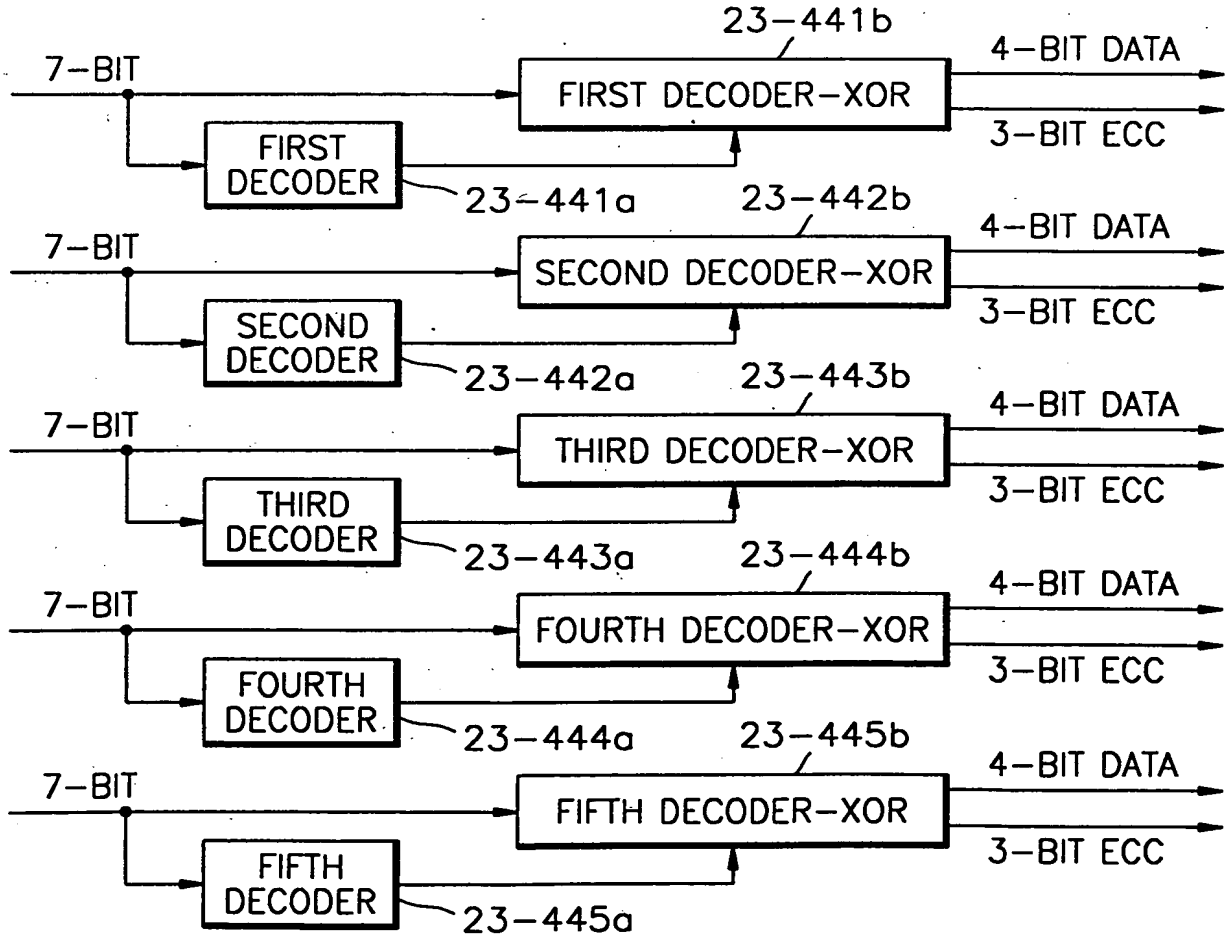

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FIG. 12

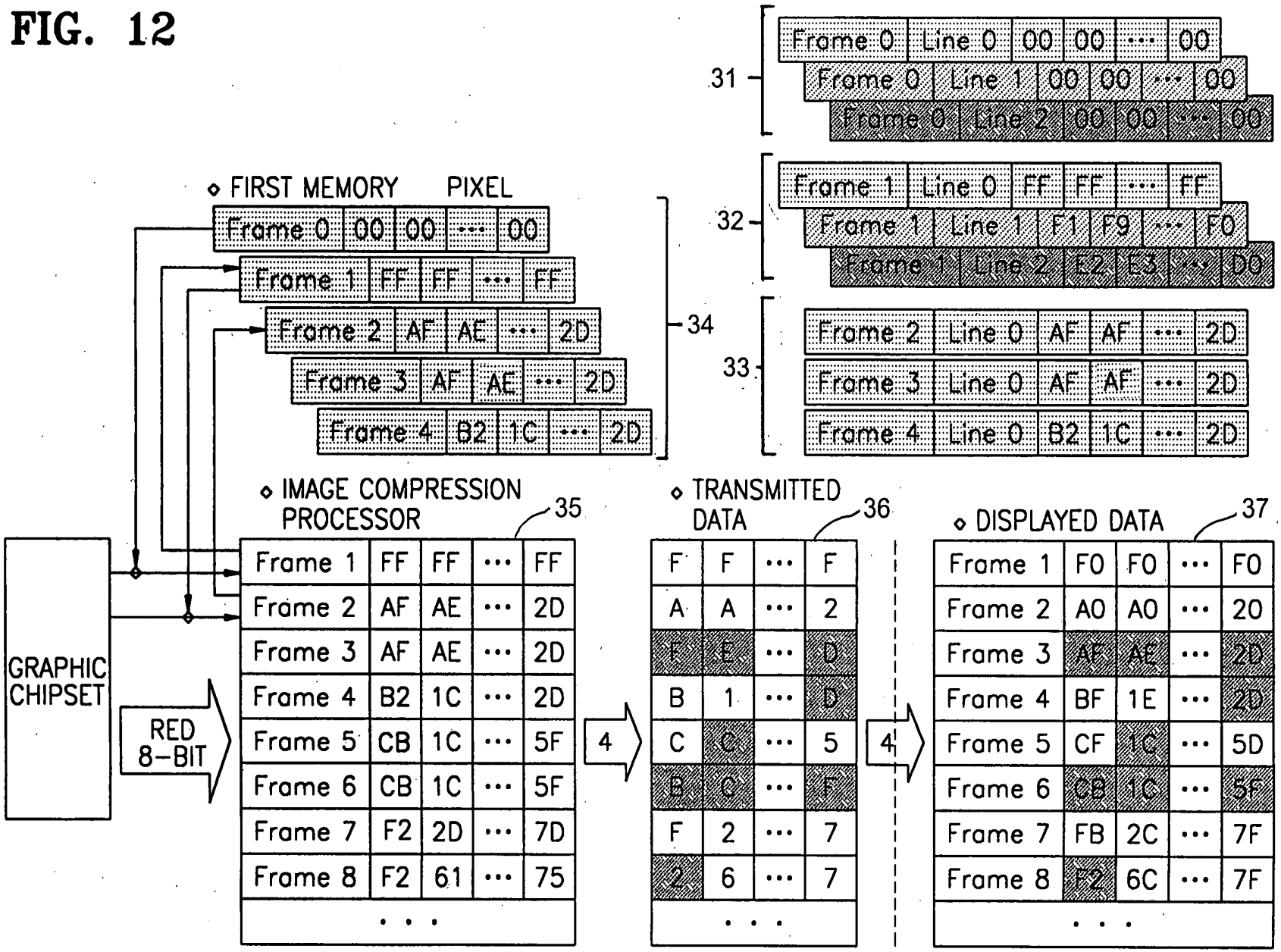

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FIG. 13

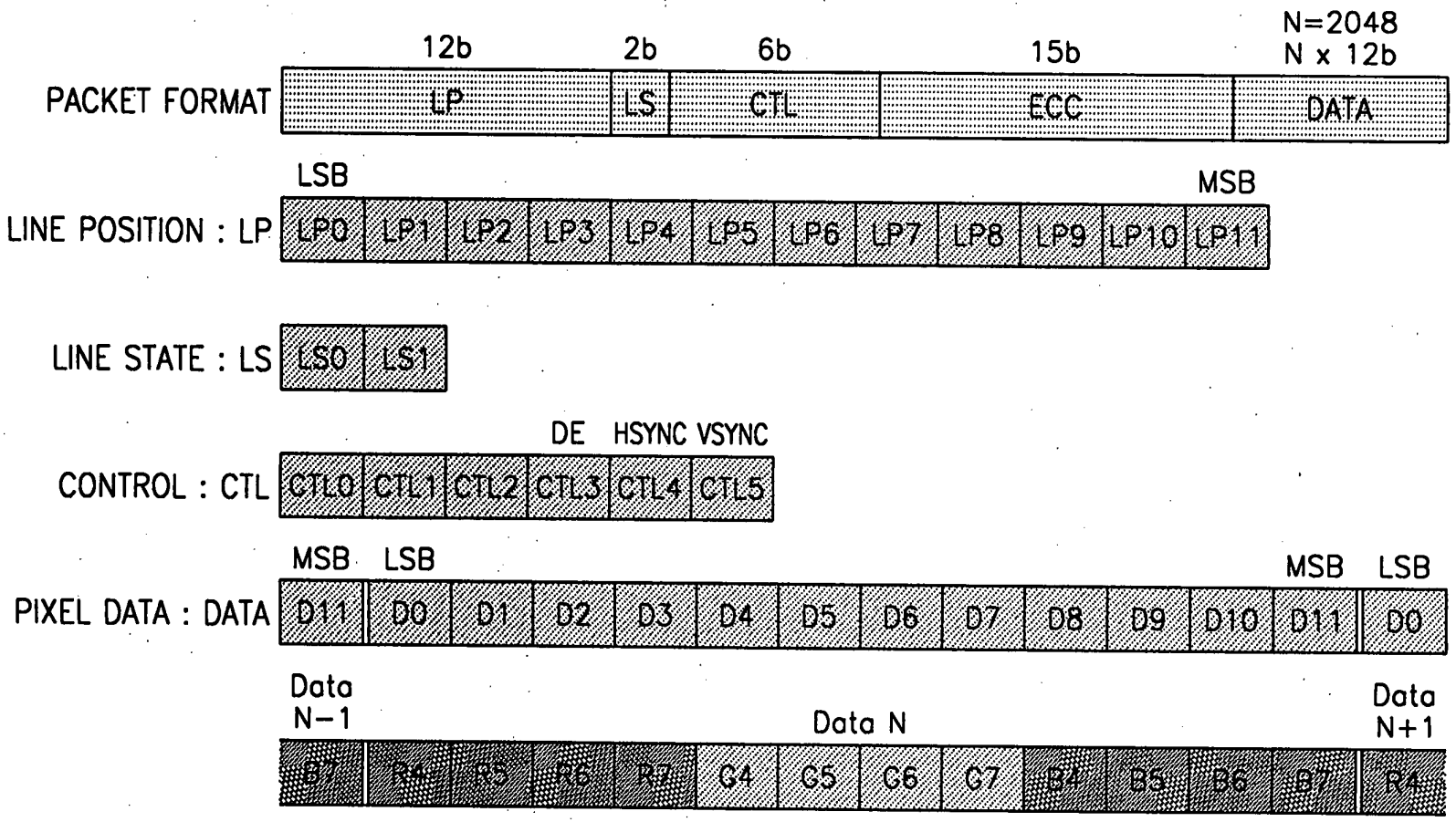

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FIG. 14

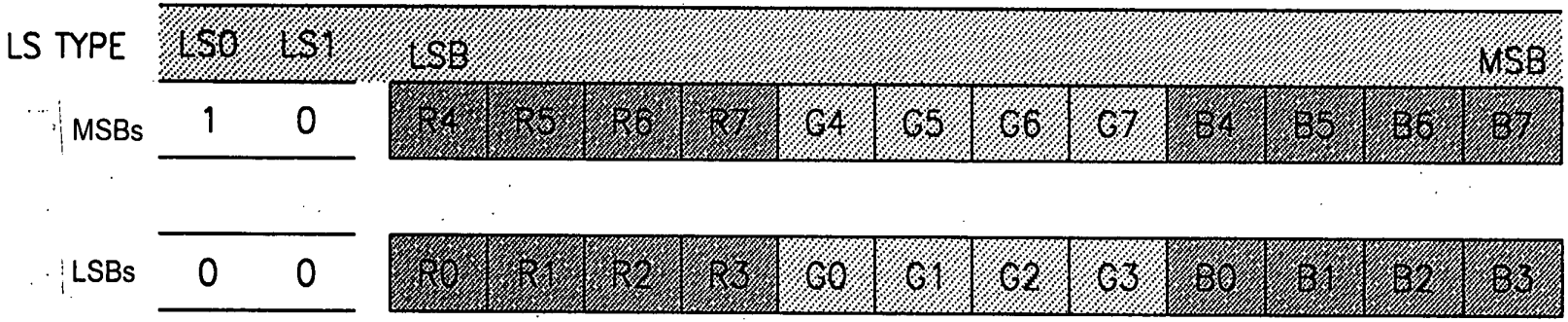

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FIG. 15

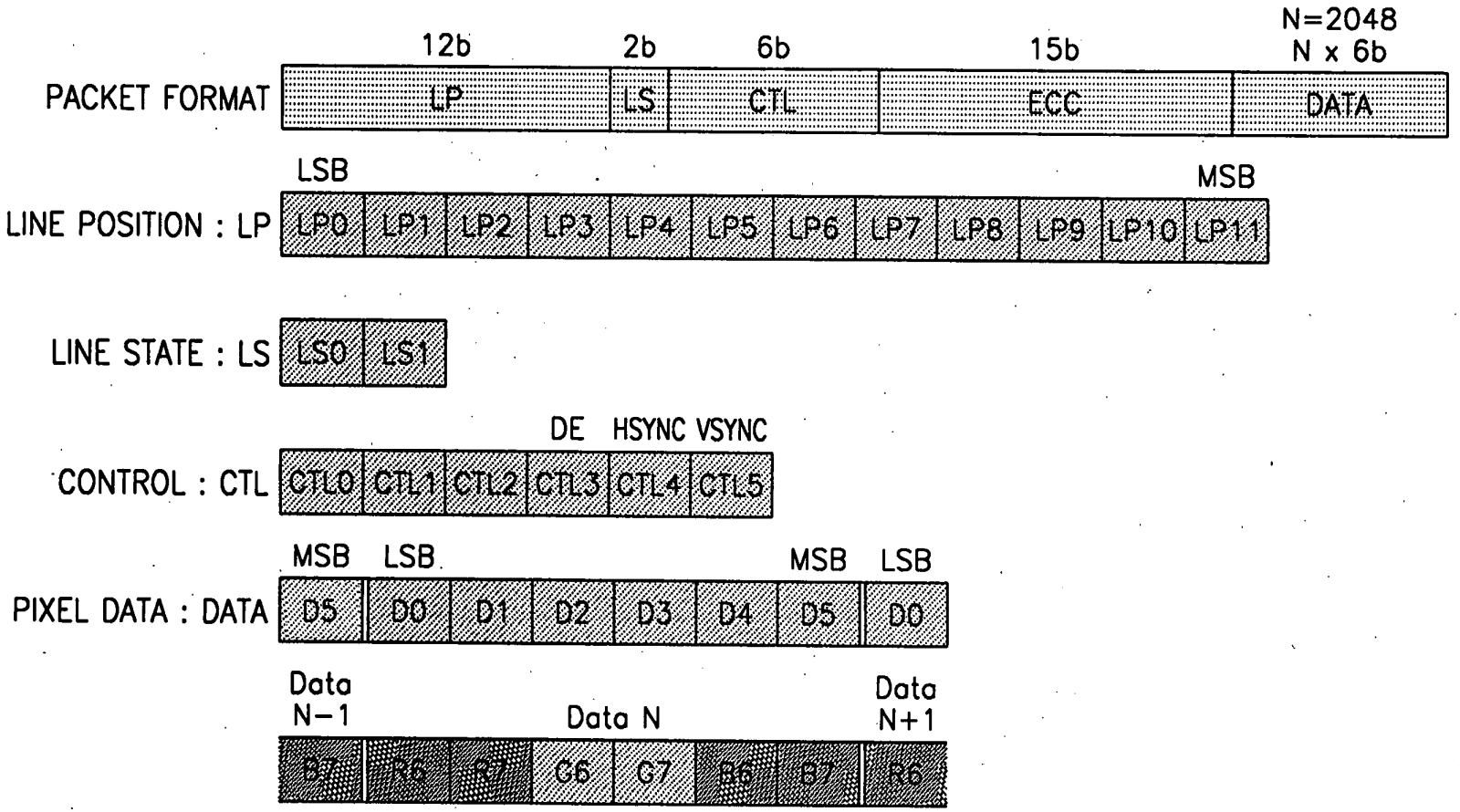

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FIG. 16

LS TYPE	LS0	LS1	LSB					MSB
UPPER MSBs	1	1	R6	R7	G6	G7	B6	B7
LOWER MSBs	0	1	R4	R5	G4	G5	B4	B5
UPPER LSBs	1	0	R2	R3	G2	G3	B2	B3
LOWER LSBs	0	0	R0	R1	G0	G1	B0	B1

FIG. 17

Frame Rate : 60 Hz 24-bit-Color

	Whole Blank		Active		Pixel Clock		TMDS GVIF 30B		HSGI-4L	
							4ch	1ch	1ch	
	Pixel	Line	Pixel	Line	MHz	2.5%	Gbps/ch	Gbps	kbps	Gbps
SVGA	1056	628	800	600	40		0.40	1.20	578	0.35
XGA	1344	806	1024	768	65		0.65	1.95	739	0.57
SXGA	1696	1066	1280	1024	108	81	1.08	2.43	924	0.95
UXGA	2160	1250	1600	1200	162	118	1.62	3.54	1,154	1.39
HDTV	2592	1124	1920	1080	175	128	1.75	3.84	1,385	1.50
QXGA	2768	1598	2048	1536	265	193	2.65	5.79	1,477	2.27

TMDS : Transition Minimized Differential Signal
GVIF : Gigabit Video Interface
HSGI-4L : 4-bit Packet Line (PRESENT INVENTION)